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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTINE W. JARVIS,
ROBERT E. BENNETT,
and BRIAN FREDERICK

Appeal 2009-013885
Application 09/828,715
Technology Center 1700

Decided: April 15, 2010

Before CATHERINE Q. TIMM, BEVERLY A. FRANKLIN, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision to reject claims 100, 101, 103-113, and 123. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Appellants' invention relates to a seam between two or more substrates including a thermoplastic tape that provides enhanced tensile strength over conventional seams without affecting barrier properties of the substrates (Spec. 4:26 to 5:5). Claims 100 and 123 are illustrative:

100. A five layer stitchless seam comprising a first thermoplastic tape portion, a first substrate portion in contact with said first thermoplastic tape portion, a second thermoplastic tape portion in contact with said first substrate portion, a second substrate portion in contact with said second thermoplastic tape portion, and a third thermoplastic tape portion in contact with said second substrate portion to provide a flexible stitchless seam between the five layers, wherein at least one of said first thermoplastic tape portion, said second thermoplastic tape portion, and said third thermoplastic tape portion is a multi-layer tape portion that runs the length of the seam and includes a first continuous layer having a first melting point and a second continuous layer having a second melting point.

123. A multilayer stitchless seam comprising a first tape portion, a first substrate portion in contact with said first tape portion, a second tape portion in contact with said first substrate portion, a second substrate portion in contact with said second tape portion, a third tape portion in contact with said second substrate portion to provide a flexible seam between the layers, and a third substrate portion, wherein at least one of the first substrate and the second substrate is a composite substrate comprising at least two layers.

The Examiner relies upon the following evidence:

<u>First Named Inventor</u>	<u>Document No.</u>	<u>Issue or Pub. Date</u>
Webb	US 2,372,632	Mar. 27, 1945
Gaylord, Jr. (Gaylord)	US 3,970,079	Jul. 20, 1976
Obayashi	US 4,410,575	Oct. 18, 1983

The Examiner maintains, and Appellants seek review of, the following rejections:

1. The rejection of claim 123 under 35 U.S.C. § 102(b) as anticipated by Obayashi;¹ and
2. The rejection of claims 100, 101, and 103-113 under 35 U.S.C. § 103(a) as unpatentable over Gaylord in view of Webb.

II. DISCUSSION

A. Claim 100

With respect to the second rejection, we select independent claim 100 to represent the group of claims rejected under 35 U.S.C. § 103, none of which are argued separately by Appellants.

1. ISSUE ON APPEAL

A first issue on appeal arising from the contentions of Appellants and the Examiner is: have Appellants identified reversible error underlying the Examiner's conclusion that one of ordinary skill in the art would have used the multi-ply tape taught by Webb as the material used for the stitchless seam taught by Gaylord to have arrived at the invention recited in claim 100? We answer this question in the negative.

2. FACTUAL FINDINGS

Gaylord teaches the use of a seam made from a strip of a thermo-plastic material, such as polyvinyl chloride, formed by a conventional

¹ Although the Answer states the rejection as including claims 124 and 125, Appellants and the Examiner agree that claims 124 and 125 have been cancelled in an Amendment filed October 31, 2007 (Br. 2; Ans. 2; Office Communication dated July 21, 2009).

extrusion process (Gaylord, col. 2, ll. 54-57). The seam is formed by heating and compressing the strip with the substrate fabric (Gaylord, col. 3, ll. 52-55; col. 4, ll. 48-51).

Gaylord teaches that the strips not only serve to join the panels, but they also provide sufficient resistance to lateral bending thereby effectively preventing rolling of the side edges of the panels (Gaylord, col. 2, ll. 57-61).

Webb teaches the use of a tape 12 made from plastic film of the vinyl resin type, which softens and fuses to fabric upon application of a heating tool (Webb, p. 1, col. 2, ll. 28-33, 40-45, and 49-55).

Webb teaches that the material will form a water tight seam (Webb, p. 1, col. 2, l. 33).

Webb teaches that Fig. 4 illustrates a tape 12 that comprises three plies of material. According to Webb, “[t]he three plies of this strip are fused into a single pliable tape which is easier to handle than the pure vinyl tape as the latter, when in its form of thin strips, is subject to static electricity.” (Webb, p. 2, col. 1, ll. 5-13.)

3. PRINCIPLES OF LAW

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). The question to be asked is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417.

Moreover, one of the ways in which a claim’s subject matter can be proved obvious is by establishing that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the

claims. *KSR*, 550 U.S. 398, 419-20. It is well settled that “[t]he significance of evidence that a problem was known in the prior art is, of course, that knowledge of a problem provides a reason or motivation for workers in the art to apply their skill to its solution.” *In re Nomiya*, 509 F.2d 566, 572 (CCPA 1975); *see also*, *KSR*, 550 U.S. at 420 (“[T]he problem motivating the patentee may be only one of many addressed by the patents subject matter . . . “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.”).

4. ANALYSIS

The Examiner puts forth two rationales as to why one of ordinary skill in the art would have used a multi-ply vinyl tape for forming the seams of Gaylord. The first rationale is “to prevent moisture from seeping between the plies of the fabric section, thus creating a water tight seam” since Webb teaches the formation of water tight seams (Ans. 5).

Appellants argue that while a waterproof seam may be reasonable for high-grade raincoats and other such articles as taught by Webb (Webb, p. 1, col. 1, ll. 5-6), there is no rationale as to why one of ordinary skill in the art would want a watertight seam in a body support such as that taught by Gaylord, which is not disclosed as water tight or even water resistant (Br. 6-7).

Considering the evidence as a whole in light of the law of obviousness, we determine that the evidence weighs in favor of the Examiner’s conclusion. Webb indicates that forming a water proof seam is a problem in some garments and teaches a solution to the problem, that is, the

use of multi-ply vinyl resin tape. In the area of forming seams in garments, solving the known problem of waterproofing using the known solution of Web provides a reason for workers in the art to make the modification that would arrive at the claimed invention.

We further cannot agree with Appellants that differences between the intended uses of the garments of Gaylord and Webb would dissuade the ordinary artisan from forming a seam of the multi-ply configuration of Gaylord with the additional ply of Webb. Such seams, as evidenced by the references, were known for use in different garments including waterproof garments. It would have obvious to one of ordinary skill in the garment art to use the seam in waterproof garments or any other garment requiring a waterproof seam. Moreover, Gaylord and Webb teach substantially identical vinyl tapes, and, since a multi-ply tape would likely be stiffer than a single ply tape, it is reasonable to conclude that using the tape of Webb would provide no reduction in stiffness and resistance to lateral bending over the tape taught by Gaylord.

The Examiner's second rationale is "to provide a tape that is easier to handle" since Webb teaches that a multi-ply tape is easier to handle than a single ply tape which is subjected to static electricity (Ans. 7). The Examiner's second rationale flows from the teachings of the prior art references and is reasonable on its face. Moreover, Appellants have failed to put forth any argument identifying an error in the Examiner's second rationale.

Accordingly, we are not persuaded of reversible error in the Examiner's conclusion that one of ordinary skill in the art would have used

the multi-ply tape taught by Webb as the material used for the stitchless seam taught by Gaylord to have arrived at the invention recited in claim 100.

B. CLAIM 123

1. ISSUE ON APPEAL

A second issue on appeal arising from the contentions of Appellants and the Examiner is: have Appellants identified reversible error in the Examiner's finding that Obayashi teaches a "third substrate portion" as recited in claim 123? We answer this question in the negative.

2. FACTUAL FINDINGS

Appellants' Specification does not use the phrase "substrate portion" nor does it define what is meant by the phrase "third substrate portion" (*see generally* Spec.).

Appellants' Specification teaches that the seam of the invention may be used to join more than two substrates (Spec. 4:26-27) but provides no examples to describe the location of the third substrate with respect to the disclosed seams.

3. PRINCIPLES OF LAW

During examination, "claims . . . are to be given their broadest reasonable interpretation consistent with the specification, and . . . claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (*quoting In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990)). Absent claim language carrying a narrow meaning, we only limit the claim based on the specification when the

broader definition is expressly disclaimed. *In re Bigio*, 381 F.3d 1320, 1324-25 (Fed. Cir. 2004).

4. ANALYSIS

The Examiner has noted that claim 123 recites a “third substrate portion” and not a “third substrate” and does not recite that the “third substrate portion” is provided in any particular area with respect to the seam (Ans. 9). As such, the Examiner finds that any part of the first fabric (first substrate) or any part of the second fabric (second substrate) may constitute a “third substrate portion” (*id.*). We agree. The term “substrate portion” has a broader meaning than the term “substrate,” and would reasonably encompass any “portion” of one of the substrates taught by Obayashi. The Examiner’s claim interpretation is consistent with the broadest reasonable interpretation read in light of the specification as it would be interpreted by one of ordinary skill in the art. Moreover, Appellants present no arguments to rebut the Examiner’s claim interpretation.

III. CONCLUSION

On the record before us² and for the reasons discussed above, we sustain the rejections maintained by the Examiner.

IV. DECISION

We affirm the Examiner’s decision.

²Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2008).

V. TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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